



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8

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Ref: 8EPR-ER

ACTION MEMORANDUM

SUBJECT: Approval and Funding for a Time-Critical Removal Action at the Moline Street Polychlorinated Biphenyls (PCB) Site, Adams County, Colorado (with attachments)

FROM: Joyel Dhieux
Federal On-Scene Coordinator

THRU: Laura Williams, Unit Leader
Emergency Response

TO: David Ostrander, Director
Emergency Response and Preparedness Program

Site ID #A898

I. Purpose

The purpose of this Action Memorandum is to request and document approval of a removal action described herein for the Moline Street PCB Site (Site), located in Aurora, Adams County, Colorado. This CERCLA removal action will be implemented by the Dow Chemical Company and Hi-Tec Plastics, Inc., to mitigate the threats to human health and the environment from the potential release of PCBs found on-site in the soils and groundwater and infrastructure. While additional petroleum hydrocarbons and metals have been detected on-site, the primary objective of the removal action is to address the high levels of PCBs.

The levels of contamination and the potential for release off-site meet the criteria for initiating a time-critical removal action under 40 CFR §300.415(b)(2) of the National Contingency Plan (NCP). The removal action will require less than 12 months and \$2 million to complete. Based on the nature of the Site conditions and the response, there are no nationally significant or precedent-setting issues associated with this removal action.

II. Site Conditions and Background

Site Name:	Moline Street PCBs
Category of Removal:	Time-Critical Removal Action
Superfund Site ID (SSID):	#A898
NRC Case Number:	NA

CERCLIS Number: COD030446637
Site Location: 3555 Moline Street, Aurora, Colorado 80010
Lat/Long: 39.765834° Latitude, -104.855612° Longitude
NPL Status: Not an NPL site, not planned for future NPL listing
Removal Start Date: Estimated January 2014

A. Site Description

1. Removal Site Evaluation

The Site has a long history of magnesium extrusion and fabrication operations. The Dow Chemical Company USA – Magnesium Extrusion Fabrication Division (Dow) operated a magnesium extrusion facility at the Site from 1969 – 1999. The business operations were purchased by Timminco Corporation in 1999. Aurora Smith RD Ventures LLC purchased the Site in 2007, and Timminco continued to operate the magnesium extrusion facility until 2009. The Site remained unoccupied from 2009 until 2011. In 2011, Hi-Tec Plastics leased the Site for plastic recycling operations and intends to purchase the Site property.

Over the past 15 years, several Phase I and Phase II environmental investigations have occurred. Only the most recent Phase II investigations conducted in 2012 and 2013 by the current property owner, Aurora Smith RD Ventures, LLC C/O David Goodell, and the prospective purchaser, Hi-Tec Plastics, Inc., sampled for and found high levels of PCBs in soils, groundwater and the concrete floor.

PCBs are suspected to have been used in the operation of metal presses at the magnesium extrusion facility. Dow reportedly had one spill of 10 to 20 gallons of PCBs in 1985¹. PCBs saturated concrete within a building and the surrounding soils. Sampling conducted in 2012 and 2013 found concentrations in excess of the PCB action level in the sub-surface soils and concrete. The highest levels of PCBs in soils have been found in the skimmer room and a secondary outer structure. These levels range from 762 ppm – 9,240 ppm at depths of 1.5 to 4 feet. Concentrations in concrete range from 562 ppm – 3,180 ppm at depths of 0.5 inches – 2 inches². By comparison, the recommended soil action level for industrial land use is 10-25 ppm. Sampling, however, has been limited. Additional sampling of the soils, concrete and building structure will be conducted to better define the extent of the removal action.

The majority of groundwater samples collected in 2012 and 2013 found concentrations of PCBs exceeding the maximum contaminant level (MCL) of 0.0005mg/L for drinking water. The highest concentration of 0.0858 mg/L was sampled in groundwater in 2013. This suggests some mobility of the PCBs from soils to groundwater. The closest receptor to surface water is Sand Creek which is

¹ Application for Inclusion in the Voluntary Clean-up Program, 11380 Smith Road, Aurora, Colorado. Strategic Environmental Management L.L.C., August 31, 2010.

² Limited Phase II Environmental Site Assessment. LT Environmental. May 14, 2013.

approximately 0.3 miles southwest of the facility. Storm water from the Site may carry PCB contamination and ultimately discharges to Sand Creek. There are no public water supply wells within one mile of the Site.

Dow will conduct the additional sampling and the proposed removal action described in this Action Memorandum. Hi-Tec Plastics will also be conducting a limited part of the removal action.

2. Physical Location and Characteristics

The Site is located in an area of light industry and commercial use in Aurora, Colorado, in Adams County. The Site encompasses approximately two acres and includes one building with several additions totaling approximately 39,350 square feet. The building housed an 1800 ton press and press pit when the Site operated as a magnesium extrusion facility. The Denver metro area, which includes Aurora, has a cold, semi-arid steppe climate. High wind gusts are generally common in the winter and spring. The Site location is depicted in Figure 1 with additional site maps in the attachments.

Much of the neighboring land is undergoing redevelopment and transitioning to mixed use development. The former Denver Stapleton Airport, located 0.7 miles west of the Site, has transitioned to housing. An urban wildlife refuge, the Bluff Lake Nature Center, has been designated along Sand Creek 0.3 miles southwest from the Site. A new light rail system is also under construction due north of the Site.

3. Release or Threatened Release into the Environment of a Hazardous Substance, Pollutant or Contaminant

During operation of the magnesium extrusion equipment, PCBs were released to the concrete in and around the building. Sampling and analyses conducted in 2012 and 2013 indicate the presence of PCBs in concrete, soils and groundwater above EPA's recommended action levels. Concentrations of PCBs measured in soil ranged from 762 ppm – 9,240 ppm, greatly exceeding EPA's recommended soil action level for industrial land use of 10-25 ppm.

PCBs are hazardous substances as defined by Section 101(14) of CERCLA. Exposure to PCBs has been shown to cause cancer in animals and can cause negative effects in human reproductive, neurological, and immune systems. Humans or animals at or around the Site may come into contact with PCBs via inhalation of windblown PCB-laden dust, disturbed soils, or through dermal contact.

4. NPL Status

This Site is not on the NPL, nor is it currently proposed for inclusion on the NPL.

5. Maps, Pictures and other Graphic Representations

Additional Site maps and photographs are included in the attachments.

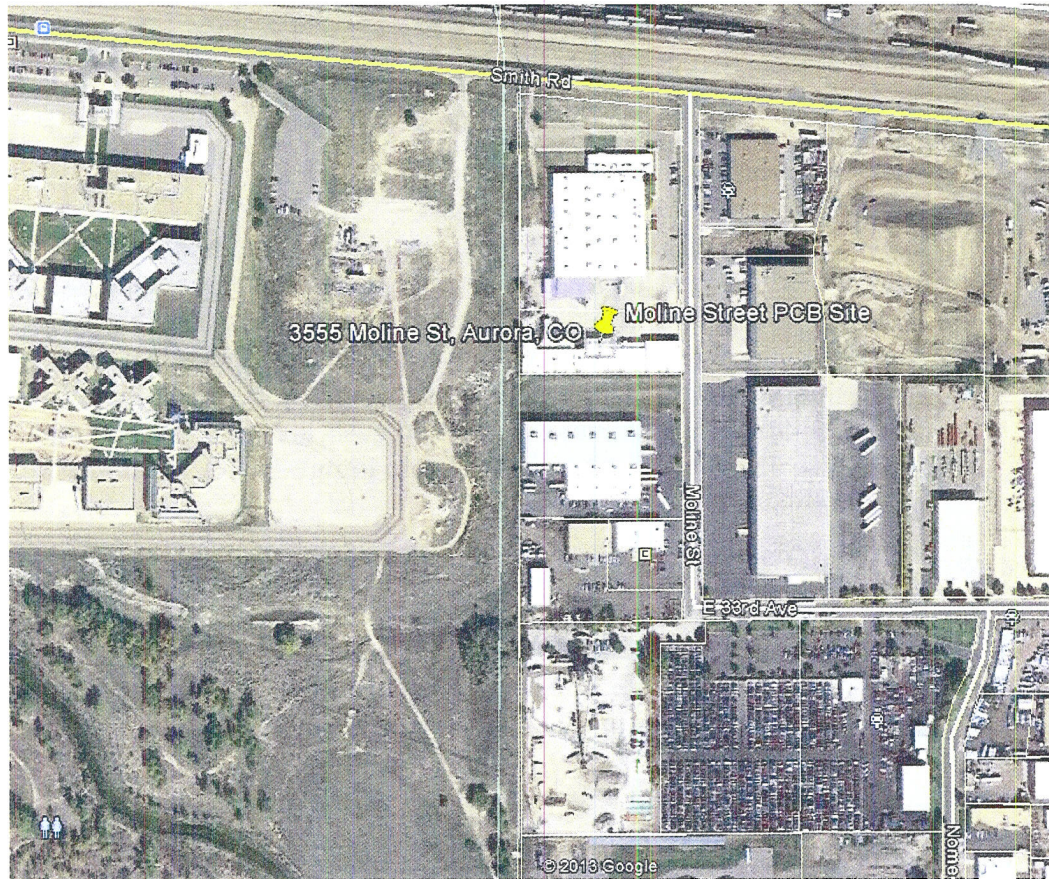


Figure 1

B. Other Actions to Date

1. Previous Actions

No other CERCLA removal actions have been performed at the Moline Street PCB Site.

2. Current Actions

No current actions are underway.

C. Federal, State and Local Authorities' Roles

The prospective purchaser, Hi-Tec, worked with the Colorado Department of Public Health and Environment (CDPHE) and the city of Aurora to explore alternative options for removing and/or containing the PCB contamination. The contamination was too high

for alternative programs such as the voluntary clean-up program. Hi-Tec was referred to the EPA Removal Program by CDPHE.

III. Threats to Public Health, Welfare or the Environment

The conditions existing at the Site present a threat to public health or welfare and the environment and meet the criteria for initiating a removal action under 40 CFR §300.415(b)(2) of the NCP. EPA has considered all of the factors from §300.415(b)(2) and determined that the following factors apply at the Site:

- (i) *Actual or potential exposure to nearby human populations, animals or the food chain from hazardous substances or pollutants or contaminants;*

PCBs are in the soils, concrete and groundwater. If left in place, PCB contamination may continue to migrate into the groundwater and towards animal and human populations near Sand Creek. Further, humans or animals at or around the Site may come into contact with PCBs via inhalation of windblown PCB-laden dust, disturbed soils, or through dermal contact. Exposure to PCBs has been shown to cause cancer in animals and can cause negative effects in human reproductive, neurological, and immune systems.

- (ii) *Actual or potential contamination of drinking water supplies or sensitive ecosystems.*

The Site is located 0.3 miles from Sand Creek and the Bluff Lake Nature Center, a wildlife refuge and sensitive ecosystem. If left on Site, the PCBs may potentially continue to migrate into the groundwater and be transported towards Sand Creek and the wildlife refuge.

- (iv) *High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate;*

PCB contamination has been found in levels exceeding EPA's recommended action level in soils, groundwater and concrete. The highest levels of PCBs in the soils range from 762 ppm – 9,240 ppm at depths of 1.5 to 4 feet. Concentrations in concrete range from 562 ppm – 3,180 ppm at depths of 0.5 inches – 2 inches³. The hazardous substances have been released to the environment as defined under CERCLA section 101(22).

- (v) *Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released;*

The Site is located in the Denver metro area and is subject to wind, rain and snow events. Storm water runoff from the Site discharges to Sand Creek and may carry contamination. In addition, wind events may transport potentially contaminated dust off-site.

³ Limited Phase II Environmental Site Assessment. LT Environmental. May 14, 2013.

- (vii) *The availability of other appropriate federal or state response mechanisms to respond to the release;*

Neither the State nor local authorities have the resources to conduct or oversee a removal action at this time.

IV. Endangerment Determination

Actual or threatened releases of hazardous substances from this site may present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. Proposed Actions and Estimated Costs

A. Proposed Actions

1. Proposed Action Description

This removal action is proposed as a series of coordinated actions between Dow Chemical and Hi-Tec with oversight by the EPA removal program. The proposed action will reduce human exposure to the hazardous substances by (1) removing the bulk of the PCB contamination and (2) reducing the mobility and transport of any remaining PCB contamination with the installation of a concrete cap.

The removal action involves the following key elements: (1) additional sampling of the soils, concrete and building structure to better determine the scope of the removal action; (2) demolition of outer building structures including buildings A, C and all or a portion of building B (See Appendix 1, Figure 2); (3) excavation of contaminated concrete and soils underlying buildings A, B and C, as determined necessary, to achieve appropriate clean up levels; (4) removal of concrete via abrasive grinding, where appropriate; (5) cleaning of any PCB contamination remaining on the walls of the building structure; (6) proper disposal of PCB-contaminated wastes in a regulated landfill; and (7) replacement of the concrete to provide a cap for any PCB contamination left in place. The removal of PCB contamination in building D will be determined following additional sampling and assessment.

The goal of the removal action is to achieve a clean up level of 25 ppm at the surface and within the top twelve inches. This level was established based on the recommended soil action level for industrial land use which is 10-25 ppm. At sites where exposures will be limited (i.e. industrial) or where soil is already covered with concrete, PCB concentrations of 25 ppm may be protective of human health and the environment.⁴

⁴ A Guide on Remedial Actions at Superfund Sites with PCB Contamination. U.S. Environmental Protection Agency, EPA Publication No. 9355.4-01FS. August 1990

Below the top twelve inches, the goal of the removal action is to achieve a clean up level of 100 ppm. All accessible contaminated soils and concrete at the Site will be replaced with clean soils and capped with concrete or asphalt. It is estimated that a ten inch cover of clean soil will reduce risks by approximately one order of magnitude.⁵ A 12 inch cover of clean soil (i.e. PCB concentrations less than 25 ppm) in combination with a concrete or asphalt cap will minimize exposure to the remaining PCBs at the Site and further reduce the possibility of migration and transport. Additional post-removal site controls, such as covenants governing future land use or soil disturbance, may be required based on the extent of contamination left in place. The covenant may restrict groundwater use and ensure the Site is only used for industrial use, pending additional clean up activities.

2. Contribution to Remedial Performance

The proposed removal action is consistent with the overall objectives for the Site to mitigate the risks to human health and the environment due to releases of PCBs.

3. Engineering Evaluation/Cost Analysis (EE/CA)

An EE/CA is not required for a time-critical removal action.

4. Applicable or Relevant and Appropriate Requirements (ARARs)

Removal actions conducted under CERCLA are required to attain ARARs to the extent practicable considering the exigencies of the situation. In determining whether compliance with ARARs is practicable, the EPA may consider appropriate factors including the urgency of the situation and the scope of the removal action to be conducted. A discussion of identified ARARs is included in Attachment 3.

5. Project Schedule:

The removal action is anticipated to begin in January 2014. All removal activities are planned to be completed by September 30, 2014.

B. Estimated Costs

Barring unforeseen events, EPA's costs for this PRP-led removal action will be limited to project oversight, which will be subject to reimbursement.

VI. Expected Change in the Situation Should Action Be Delayed or Not Taken

A delay in action or no action at this Site would increase the actual or potential threats to the public health and/or the environment

⁵ Guidance on Remedial Actions for Superfund Sites with PCB Contamination. U.S. Environmental Protection Agency, EPA/540/G-90/007. August 1990.

VII. Outstanding Policy Issues

None identified at this time.

VIII. Enforcement


A separate Enforcement Addendum provides a confidential summary of current and potential future enforcement actions for the Site.

IX. Recommendation

This decision document represents the selected removal action for the Moline Street PCB Site in Adams County, Colorado, developed in accordance with CERCLA as amended, and is not inconsistent with the NCP. This decision is based on the administrative record for the Site.

Conditions at the Site meet the NCP section 300.415(b) criteria for a removal action and I recommend your approval of the proposed removal action. Barring unforeseen events, EPA's costs for this PRP-led removal action will be limited to project oversight, which will be subject to reimbursement.

APPROVE:



David A. Ostrander, Director
Emergency Response and Preparedness Program

1/14/14

Date

DISAPPROVE:

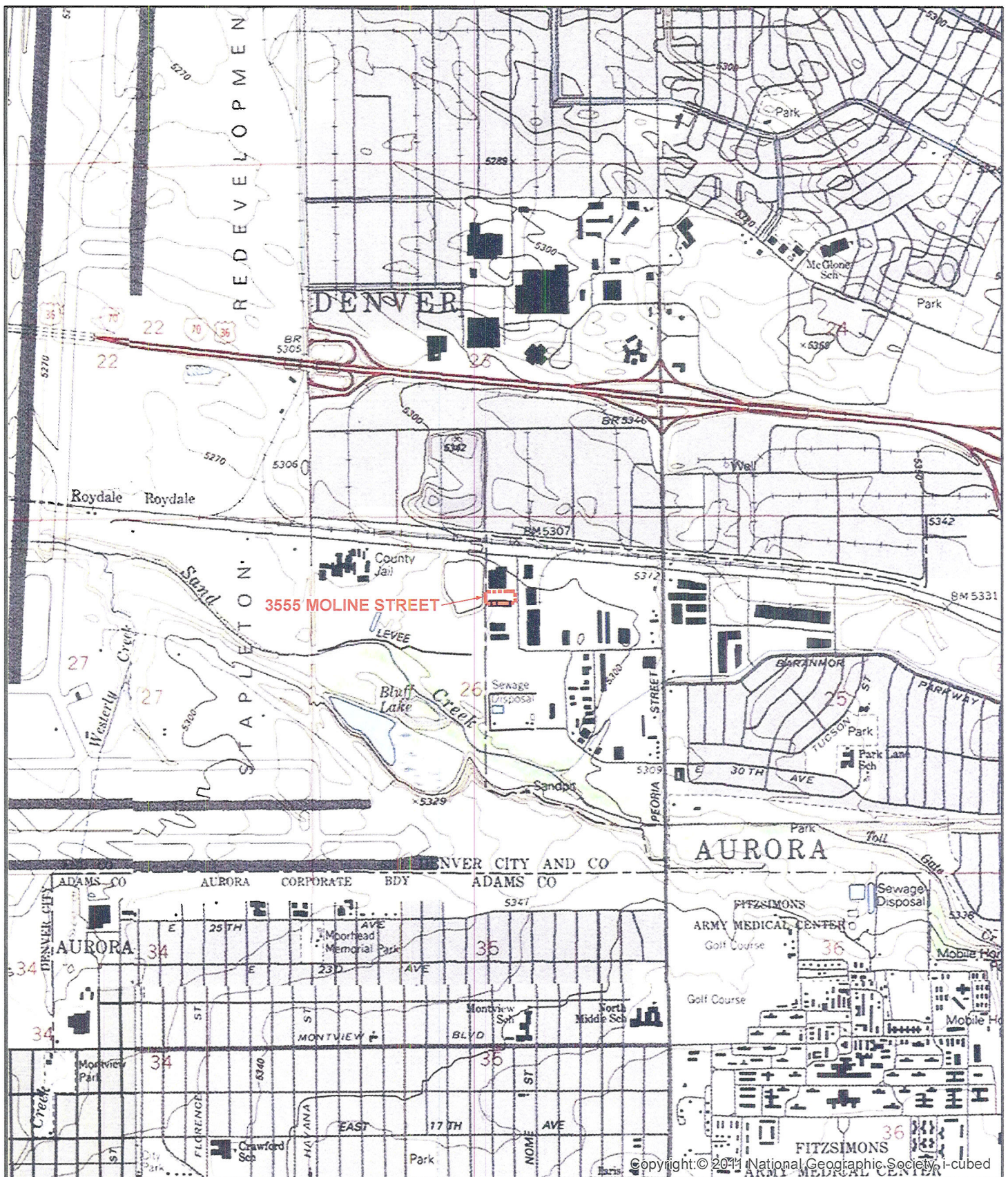
David A. Ostrander, Director
Emergency Response and Preparedness Program

Date

Attachments: 1 – Site Maps
2 – ARARs Table

Attachment 1 Site Maps⁶

⁶ Smith Road and Moline Street, Investigation and Removal Action Work Plan, Draft. URS Corporation. October 2013.




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EXPLANATION

 Property Boundary

Map Projection:
State Plane Feet, Colorado Central Zone, NAD83.
Basemap Source:
National Geographic Society, i-cubed (2011)

0 2,000
 Feet
1 inch = 2,000 feet



URS

Figure 1 LOCATION MAP

SMITH ROAD & MOLINE STREET SITE
AURORA, COLORADO

PROJECT NO.	DRAWING NO.	DATE
41569671	Fig1_Site_Location.mxd	10/16/13

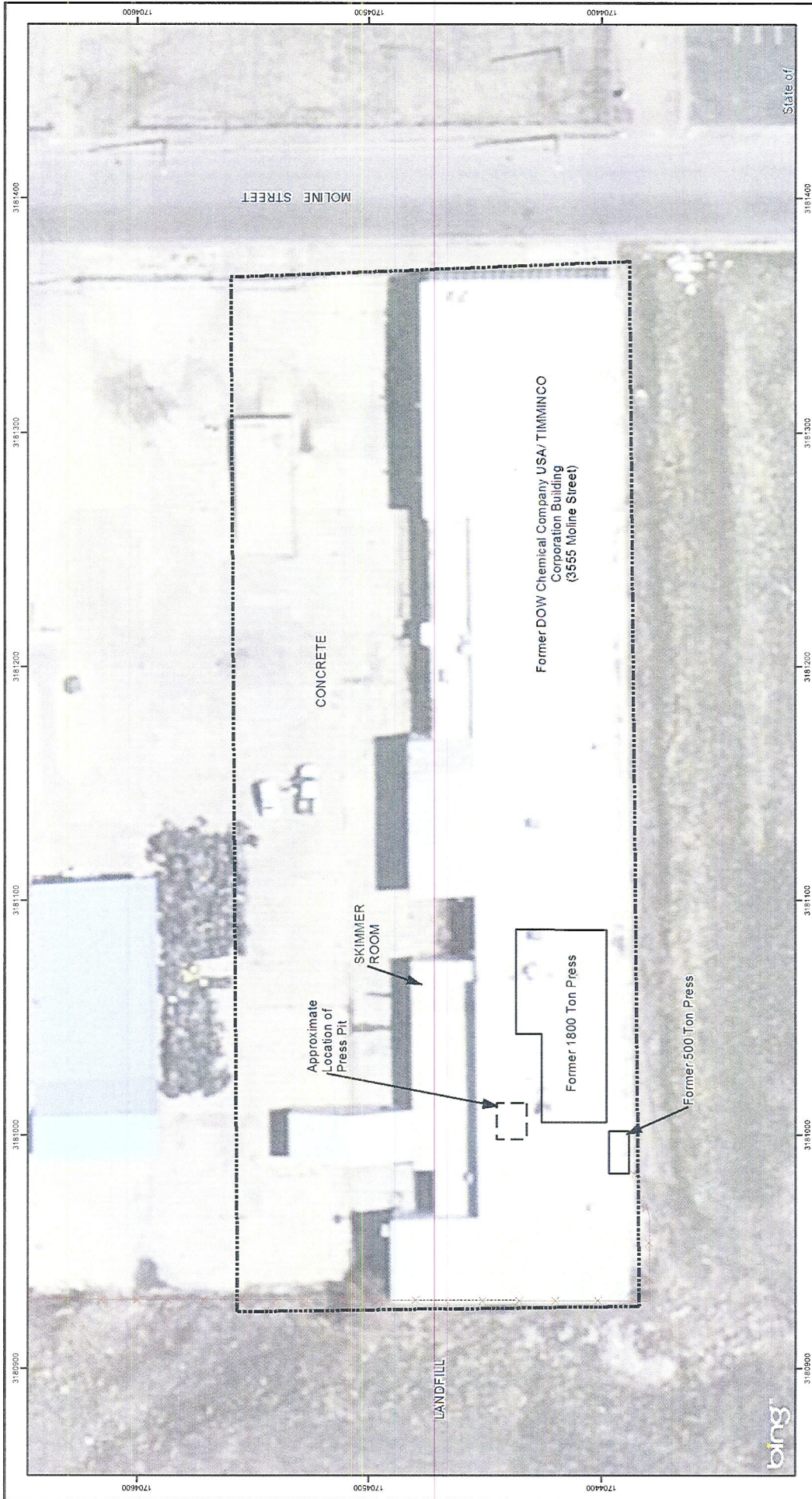


Figure 2 SITE MAP

Map Projection:
State Plane Feet, Colorado Central Zone, NAD83.
Aerial Photo Basemap Source:
Bing Maps, 2010 Microsoft Corporation and its data suppliers.

1 inch = 40 feet

Scale: 0 40 80 Feet

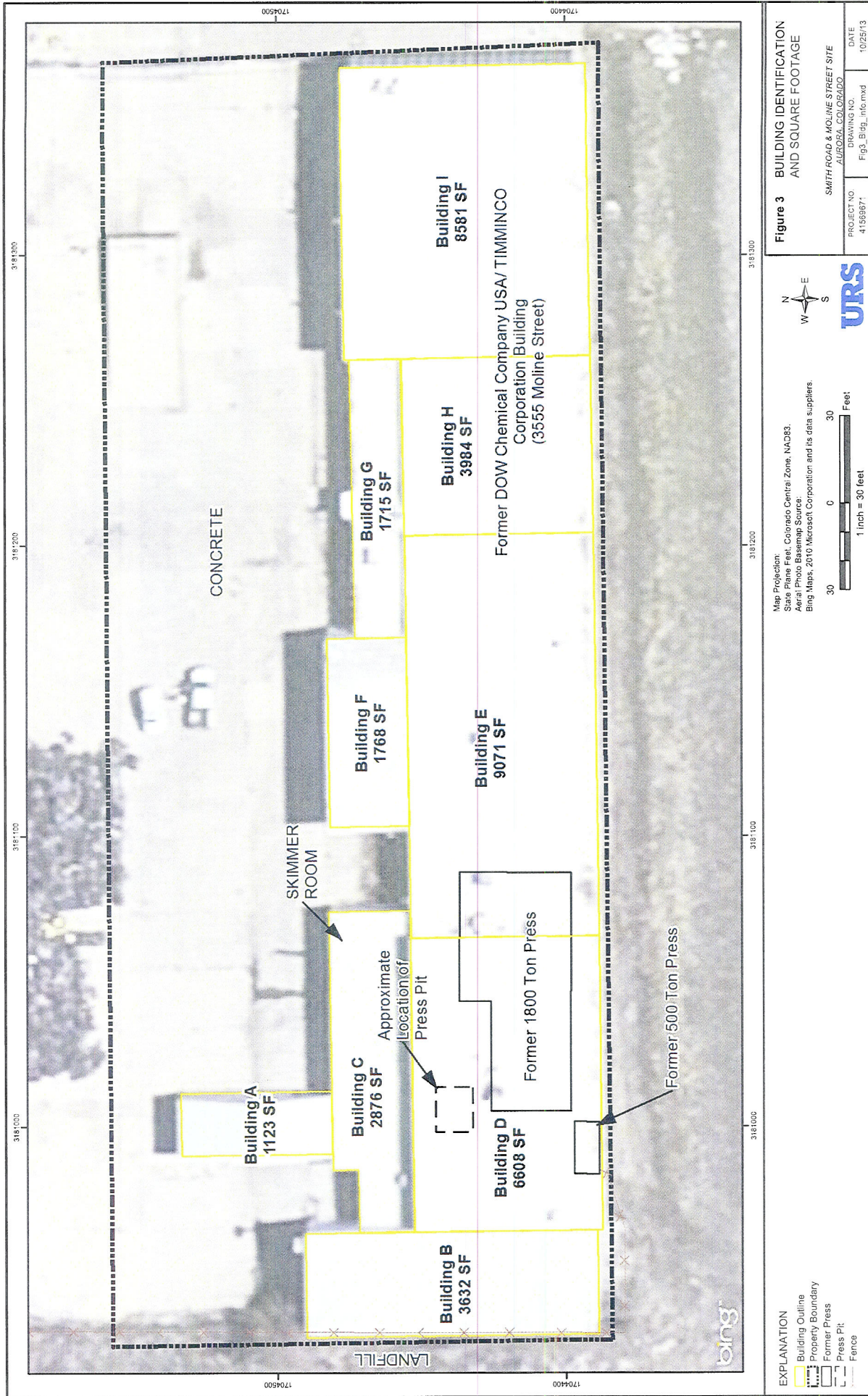
EXPLANATION

- Property Boundary
- Former Press
- Press Pit
- Fence

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SMITH ROAD & MOLINE STREET SITE
AURORA, COLORADO

PROJECT NO. 41569671	DRAWING NO. Fig2_Site_Map.mxd
DATE 10/25/13	



Attachment 2
Applicable or Relevant and Appropriate Regulations (ARARs) Table
Moline PCB Site – Location, Action and Chemical-Specific ARARs

I. INTRODUCTION

40 CFR 300.415(i) provides that fund financed removal actions under CERCLA section 104, 42 U.S.C. § 9604, attain, to the extent practicable considering the exigencies of the situation, all state and federal applicable or relevant and appropriate requirements (ARARs). In considering whether compliance with ARARs is practicable, the EPA will consider the urgency of the situation and the scope of the removal action being conducted. See 40 CFR §§ 300.415(i)(1) and (2).

This document identifies potential ARARs for the removal action to be conducted at the Moline PCB CERCLA Site. The following ARARs or groups of related ARARs are each identified by a statutory or regulatory citation, followed by a brief explanation of the ARAR and how and to what extent the ARAR is expected to apply to the activities to be conducted under this removal action.

Substantive provisions of the requirements listed below are identified as ARARs pursuant to 40 CFR § 300.400. ARARs must be attained during and at the completion of the removal action. See Preamble to the National Oil and Hazardous Substances Pollution Contingency Plan, 55 Federal Register (FR) 8695 (March 8, 1990). No federal, state or local permit will be required for the portion of any removal action conducted entirely on site in accordance with Section 121(e) of CERCLA, 42 U.S.C. § 9621(e).

II. TYPES OF ARARs

ARARs are either “applicable” or “relevant and appropriate.” Both types of requirements are mandatory under the NCP. See CERCLA § 121(d)(2)(A), 42 U.S.C. § 9621(d)(2)(A). See also, 40 CFR § 300.430(f)(1)(i)(A) (note that these references apply to remedial actions). Applicable requirements are those cleanup standards, standards of control, and other substantive requirements, criteria or limitations promulgated under federal environmental or state environmental and facility siting laws that specifically address a hazardous substance, pollutant, contaminant, removal action, location, or other circumstance found at a CERCLA site. Only those state standards that are identified by a state in a timely manner and that are more stringent than federal requirements may be applicable. See 40 CFR § 300.5.

Relevant and appropriate requirements are those cleanup standards, standards of control, and other substantive requirements, criteria or limitations promulgated under federal environmental or state environmental or facility siting laws that, while not “applicable” to hazardous substances, pollutants, contaminants, locations, or other circumstances at a CERCLA site, address problems or situations sufficiently similar to those encountered at the CERCLA site that their use is well suited to the particular site. Only those state standards that are identified in a timely manner and are more stringent than federal requirements may be relevant and appropriate. See 40 CFR § 300.5.

The determination that a requirement is relevant and appropriate is a two-step process: (1) determination if a requirement is relevant and (2) determination if a requirement is appropriate. In general, this involves a comparison of a number of site-specific factors, including an examination of the purpose of the requirement and the purpose of the proposed CERCLA action; the medium and substances regulated by the requirement and the proposed action; the actions or activities regulated by the requirement and the removal action; and the potential use of resources addressed in the requirement and the removal

action. When the analysis results in a determination that a requirement is both relevant and appropriate, such a requirement must be complied with to the same degree as if it were applicable. See CERCLA Compliance with Other Laws Manual, Vol. I, OSWER Directive 9234.1-01, August 8, 1988, p. 1-11.

ARARs are contaminant, location, or action specific. Contaminant specific requirements address chemical or physical characteristics of compounds or substances on sites. These values establish acceptable amounts or concentrations of chemicals which may be found in or discharged to the ambient environment.

Location specific requirements are restrictions placed upon the concentrations of hazardous substances or the conduct of cleanup activities, because they are in specific locations. Location specific ARARs relate to the geographical or physical positions of sites, rather than to the nature of contaminants at sites. Action specific requirements are usually technology based or activity based requirements or limitations on actions taken with respect to hazardous substances, pollutants or contaminants. A given cleanup activity will trigger an action specific requirement. Such requirements do not themselves determine the cleanup alternative but define how chosen cleanup methods should be performed.

Many requirements listed as ARARs are promulgated as identical or near identical requirements in both federal and state law, usually pursuant to delegated environmental programs administered by the EPA and the state. The Preamble to the NCP provides that such a situation results in citation to the state provision and treatment of the provision as a federal requirement. Also contained in this list are policies, guidance or other sources of information which are "to be considered" in the implementation of the removal action. Although not enforceable requirements, these documents are important sources of information which the EPA and the Colorado Department of Public Health and Environmental (CDPHE) may consider, especially in regard to the evaluation of public health and environmental risks; or which will be referred to, as appropriate, in developing cleanup actions. See, 40 CFR Section 300.400(g)(3); Preamble to the NCP, 55 Fed. Reg. 8744-8746 (March 8, 1990). These final ARARs will be set forth as performance standards for any and all removal work plans.

Standard, Requirement, Criteria, or Limitation	Citation	Description	Applicable or Relevant and Appropriate	Comments
FEDERAL				
Toxic Substances Control Act, PCB Spill Cleanup Policy	52 FR 10688 April 2, 1987	Regulates hazardous materials from manufacture to disposal	To be considered	PCB Spill Cleanup policy considered in development of clean up levels. Cleanup standards are applicable and will be applied, to the extent practicable and in consideration of the exigencies. PCB contaminated waste generated during the removal action will be disposed off-site consistent with RCRA and TSCA regulations.

Standard, Requirement, Criteria, or Limitation	Citation	Description	Applicable or Relevant and Appropriate	Comments
STATE				
Colorado Hazardous Waste Regulations	6 CCR 1007-3, pursuant to CRS § 25-15-101 et seq.	Regulates generation, storage and disposal of hazardous waste, and the siting, construction, operation, and maintenance of hazardous waste disposal facilities	Applicable	PCB contaminated waste generated during the removal action will be disposed off-site consistent with RCRA and TSCA regulations.
Colorado Fugitive Dust Control Plan/Opacity Regulation No. 1	5 CCR 1001-3, pursuant to CRD 25-7-101 et seq.	Regulates fugitive emissions generated during construction	Relevant and appropriate	Contemplated actions would not trigger permit requirements; however dust control will be required.
Colorado Groundwater Standards	5 CCR 1002-8 § 3.11.0-3.11.8 and 1002-41, pursuant to CRS § 25-8-101 et. seq.	Sets standards for contaminants in groundwater	Not applicable	Removal action is limited in scope. Contemplated actions will remove source of contamination, but will not treat groundwater.
Colorado Environmental Covenants Law	CRS §§ 25-15-317 to 327	Requires environmental covenants (ECs) or notices of environmental use restrictions (RNs) whenever residual contamination not safe for all uses is left in place or an engineered feature or structure that requires monitoring, maintenance, or operation is included in the remedy	Applicable (Substantive Provisions)	Covenant may restrict land use and/or groundwater use.

Standard, Requirement, Criteria, or Limitation	Citation	Description	Applicable or Relevant and Appropriate	Comments
Colorado Noise Abatement Statute	CRS § 25-12-101, et seq.	Establishes standards for controlling noise	Applicable	Site is in a commercial or industrial area.

